National Pollutant Discharge Elimination System (NPDES) Permit Program

F A C T S H E E T

Regarding an NPDES Permit to Discharge to Waters of the State of Ohio
for **City of Wooster WPCP**

Public Notice No.: 13-04-069
Public Notice Date: April 26, 2013
Comment Period Ends: May 26, 2013

OEPA Permit No.: **3PD00013*QD**
Application No.: **OH0028185**

Name and Address of Applicant:

City of Wooster
1123 Old Columbus Rd
Wooster, Ohio 44691

Name and Address of Facility Where Discharge Occurs:

City of Wooster
1123 Old Columbus Rd
Wooster, Ohio 44691
Wayne County

Receiving Water: **Killbuck Creek**

Subsequent Stream Network: **Walhonding River to Muskingum River to Ohio River**

Introduction

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations, Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency, as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act and Ohio Water Pollution Control Law (ORC 6111). Decisions to award variances to Water Quality Standards or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Effluent limits based on available treatment technologies are required by Section 301(b) of the Clean Water Act. Many of these have already been established by U.S. EPA in the effluent guideline regulations (a.k.a. categorical regulations) for industry categories in 40 CFR Parts 405-499. Technology-based regulations for publicly-owned treatment works are listed in the Secondary Treatment Regulations (40 CFR Part 133). If regulations have not been established for a category of dischargers, the director may establish technology-based limits based on best professional judgment (BPJ).

Ohio EPA reviews the need for water-quality-based limits on a pollutant-by-pollutant basis. Wasteload allocations are used to develop these limits based on the pollutants that have been detected in the discharge, and the receiving water's assimilative capacity. The assimilative capacity depends on the flow

in the water receiving the discharge, and the concentration of the pollutant upstream. The greater the upstream flow, and the lower the upstream concentration, the greater the assimilative capacity is. Assimilative capacity may represent dilution (as in allocations for metals), or it may also incorporate the break-down of pollutants in the receiving water (as in allocations for oxygen-demanding materials).

The need for water-quality-based limits is determined by comparing the wasteload allocation for a pollutant to a measure of the effluent quality. The measure of effluent quality is called PEQ - Projected Effluent Quality. This is a statistical measure of the average and maximum effluent values for a pollutant. As with any statistical method, the more data that exists for a given pollutant, the more likely that PEQ will match the actual observed data. If there is a small data set for a given pollutant, the highest measured value is multiplied by a statistical factor to obtain a PEQ; for example if only one sample exists, the factor is 6.2, for two samples - 3.8, for three samples - 3.0. The factors continue to decline as samples sizes increase. These factors are intended to account for effluent variability, but if the pollutant concentrations are fairly constant, these factors may make PEQ appear larger than it would be shown to be if more sample results existed.

Summary of Permit Conditions

The effluent limits and monitoring requirements proposed for the following parameters are the same as in the current permit, although some monitoring frequencies have changed: flow, temperature, dissolved oxygen, $CBOD_5$, total suspended solids, winter ammonia, nitrite + nitrate, oil and grease, pH, cadmium, chromium, hexavalent chromium, lead, nickel, total phosphorus and zinc.

New or lower water-quality-based limits are proposed for summer ammonia, bis(2-ethylhexyl)phthalate and copper because effluent data show there is reasonable potential for violation of water quality standards.

Monthly monitoring of total filterable residue is proposed for the life of the permit. The purpose of the proposed monitoring is to collect additional data on the frequency of occurrence and variability in the plant's effluent.

Semi-annual acute and chronic toxicity monitoring is proposed for the life of the permit. This satisfies the minimum testing requirements of OAC 3754-33-07(B)(11) and will adequately characterize toxicity in the plant's effluent.

Final effluent limits are proposed for *Escherichia coli*. New water quality standards for *E. coli* became effective in March 2010. A compliance schedule is proposed for meeting these new final effluent limits. Based on best engineering judgment, it is proposed that the plant comply with its current fecal coliform limits during the interim period.

Current permit limits for free cyanide and mercury are being removed because effluent data shows that they no longer have the reasonable potential to contribute to exceedances of water quality standards.

Wooster WPCP has a Long Term Control Plan that it has been implementing since 2001. There are two projects left to be completed:

1. Gasche Street Area, which was supposed to be completed in 2009.
2. Spink Street Area, which was supposed to be completed in 2010.

The permit contains a compliance schedule, allowing 24 months to complete these two projects.

The permit also contains compliance schedules for developing a Long-Term Control Plan Post-Construction Compliance Monitoring Plan and submitting a Long Term Control Plan Completion Evaluation Report.

In Part II of the permit, special conditions are included that address sanitary sewer overflow reporting; operator certification, minimum staffing and operator of record; whole effluent toxicity testing; storm water compliance; outfall signage; and pretreatment program requirements.

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Procedures for Participation in the Formulation of Final Determinations

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be addressed to:

Legal Records Section
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

The OEPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews, because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

For additional information about this fact sheet or the draft permit, contact Ashley N. Ward (Central Office), (614) 644-4852, ashley.ward@epa.state.oh.us or Todd Surrena (Northeast District Office), (330) 963-1255, todd.surrena@epa.state.oh.us.

Location of Discharge/Receiving Water Use Classification

Wooster WPCP discharges to Killbuck Creek at River Mile (RM) 49.88. Figure 1 shows the approximate location of the facility.

This segment of the Killbuck Creek is described by Ohio EPA River Code: 17-150, U.S. EPA River Reach #: 05040003-05-05, County: Wayne, Ecoregion: Erie-Ontario Drift Lake Plain. Killbuck Creek is designated for the following uses under Ohio's Water Quality Standards (OAC 3745-24): Warmwater Habitat (WWH), Agricultural Water Supply (AWS), Industrial Water Supply (IWS) and Primary Contact Recreation (PCR).

Use designations define the goals and expectations of a waterbody. These goals are set for aquatic life protection, recreation use and water supply use, and are defined in the Ohio WQS (OAC 3745-1-07). The use designations for individual waterbodies are listed in rules -08 through -32 of the Ohio WQS. Once the goals are set, numeric water quality standards are developed to protect these uses. Different uses have different water quality criteria.

Use designations for aquatic life protection include habitats for coldwater fish and macroinvertebrates, warmwater aquatic life and waters with exceptional communities of warmwater organisms. These uses all meet the goals of the federal Clean Water Act. Ohio WQS also include aquatic life use designations for waterbodies which can not meet the Clean Water Act goals because of human-caused conditions that can not be remedied without causing fundamental changes to land use and widespread economic impact. The dredging and clearing of some small streams to support agricultural or urban drainage is the most common of these conditions. These streams are given Modified Warmwater or Limited Resource Water designations.

Recreation uses are defined by the depth of the waterbody and the potential for wading or swimming. Uses are defined for bathing waters, swimming/canoeing (Primary Contact) and wading only (Secondary Contact - generally waters too shallow for swimming or canoeing).

Water supply uses are defined by the actual or potential use of the waterbody. Public Water Supply designations apply near existing water intakes so that waters are safe to drink with standard treatment. Most other waters are designated for agricultural and industrial water supply.

Facility Description

The City of Wooster WPCP is designed to treat an average daily flow of 7.5 million gallons per day (MGD). The treatment plant was originally constructed in 1938, and the most recent upgrade was in 2007. Treatment plant processes include influent pumping, perforated plate / bar screen, grit removal, thickening, primary settling, activated sludge, secondary clarification, biological nutrient removal, post aeration, and ultraviolet disinfection. Sludge is digested aerobically and anaerobically and land applied.

The Wooster WPCP will be undergoing construction to upgrade the plant in order to comply with NPDES permit limits.

The City of Wooster's collection system includes both sanitary and combined sewers. Approximately 80 percent of the system consists of separate sanitary sewers and 20 percent combined storm and sanitary sewers.

A total of 10 industrial users, including 2 categorical and 2 non-categorical significant industrial users, discharge approximately 0.6 MGD in the Wooster collection system. The Wooster WPCP implements an approved pretreatment program.

Description of Existing Discharge

Table 1 presents chemical specific data compiled from data reported in annual pretreatment reports, and data collected by Ohio EPA.

Table 2 presents a summary of unaltered Discharge Monitoring Report (DMR) data for outfall 001. Data are presented for the period August 2007 through September 2012, and current permit limits are provided for comparison.

Table 3 summarizes the chemical specific data for outfall 3PD00013001 by presenting the average and maximum Projected Effluent Quality (PEQ) values.

Tables 4 and 5 summarize the results of acute and chronic whole effluent toxicity tests of the final effluent.

The City reports sanitary sewer overflow (SSO) occurrences under Station 300 in its NPDES permit. The City reported 3 SSOs in 2010, 9 in 2011 and 2 through September 2012. Elimination of overflows is addressed in the Director's Final Findings and Orders, signed on February 21, 2012.

Under the provisions of 40 CFR 122.21(j), the Director has waived the requirement for submittal of expanded effluent testing data as part of the NPDES renewal application. Ohio EPA has access to substantially identical information through the submission of annual pretreatment program reports and/or from effluent testing conducted by the Agency.

Assessment of Impact on Receiving Waters

An assessment of the impact of a permitted point source on the immediate receiving waters includes an evaluation of the available chemical/physical, biological, and habitat data which have been collected by Ohio EPA pursuant to the Five-Year Basin Approach for Monitoring and NPDES Reissuance. Other data may be used provided it was collected in accordance with Ohio EPA methods and protocols as specified by the Ohio Water Quality Standards and Ohio EPA guidance documents. Other information which may be evaluated includes, but is not limited to: NPDES permittee self-monitoring data; effluent and mixing zone bioassays conducted by Ohio EPA, the permittee, or U.S. EPA.

In evaluating this data, Ohio EPA attempts to link environmental stresses and measured pollutant exposure to the health and diversity of biological communities. Stresses can include pollutant discharges (permitted and unpermitted), land use effects, and habitat modifications. Indicators of exposure to these stresses include whole effluent toxicity tests, fish tissue chemical data, and fish health biomarkers (for example, fish blood tests).

Use attainment is a term which describes the degree to which environmental indicators are either above or below criteria specified by the Ohio Water Quality Standards (WQS; Ohio Administrative Code 3745-1). Assessing use attainment status for aquatic life uses primarily relies on the Ohio EPA biological criteria (OAC 3745-1-07; Table 7-15). These criteria apply to rivers and streams outside of mixing zones. Numerical biological criteria are based on measuring several characteristics of the fish and macroinvertebrate communities; these characteristics are combined into multimetric biological indices including the Index of Biotic Integrity (IBI) and modified Index of Well-Being (MIwb), which indicate

the response of the fish community, and the Invertebrate Community Index (ICI), which indicates the response of the macroinvertebrate community. Numerical criteria are broken down by ecoregion, use designation, and stream or river size. Ohio has five ecoregions defined by common topography, land use, potential vegetation and soil type.

Three attainment status results are possible at each sampling location -full, partial, or non-attainment. Full attainment means that all of the applicable indices meet the biocriteria. Partial attainment means that one or more of the applicable indices fails meet the biocriteria. Nonattainment means that either none of the applicable indices meet the biocriteria or one of the organism groups indicates poor or very poor performance. An aquatic life use attainment table (see Table 6) is constructed based on the sampling results and is arranged from upstream to downstream and includes the sampling locations indicated by river mile, the applicable biological indices, the use attainment status (i.e., full, partial, or non), the Qualitative Habitat Evaluation Index (QHEI), and comments and observations for each sampling location.

The most recent biological survey conducted in 2009 found the Killbuck Creek downstream of Wooster to be in partial attainment of the warmwater habitat designated use. The causes were listed as "direct habitat alterations, dissolved oxygen and organic enrichment." The sources of impairment were listed as "channelization, Wooster WWTP and natural sources." For further information please refer to the report *Biological and Water Quality Study of the Killbuck Creek Watershed, 2009* (Ohio EPA, 2011) http://epa.ohio.gov/dsw/tmdl/MuskingumRiver.aspx.

A TMDL study is currently in progress to address impairments to the Killbuck Creek and other streams in the Muskingum River basin. This study will be posted on the OEPA website at http://www.epa.state.oh.us/dsw/tmdl/index.aspx#TMDL_Projects.

Development of Water-Quality-Based Effluent Limits

Determining appropriate effluent concentrations is a multiple-step process in which parameters are identified as likely to be discharged by a facility, evaluated with respect to Ohio water quality criteria, and examined to determine the likelihood that the existing effluent could violate the calculated limits.

Parameter Selection Effluent data for the Wooster WPCP were used to determine what parameters should undergo wasteload allocation. The parameters discharged are identified by the data available to Ohio EPA - Discharge Monitoring Report (DMR) data submitted by the permittee, compliance sampling data collected by Ohio EPA, and any other data submitted by the permittee, such as priority pollutant scans required by the NPDES application or by pretreatment, or other special conditions in the NPDES permit. The sources of effluent data used in this evaluation are as follows:

Self-monitoring data (DMR)	August 2007 through September 2012
Pretreatment data	2008 through 2011
Ohio EPA compliance sampling data	2008 through 2011

The data were examined, and the following values were removed from the evaluation to give a more reliable projection of effluent quality: Mercury: 428 ng/L and 43.2 ng/L.

This data is evaluated statistically, and Projected Effluent Quality (PEQ) values are calculated for each pollutant. Average PEQ (PEQ_{avg}) values represent the 95^{th} percentile of monthly average data, and maximum PEQ (PEQ_{max}) values represent the 95^{th} percentile of all data points. The average and maximum PEQ values are presented in Table 3.

The PEQ values are used according to Ohio rules to compare to applicable water quality standards (WQS) and allowable wasteload allocation (WLA) values for each pollutant evaluated. Initially, PEQ values are compared to the applicable average and maximum WQS. If both PEQ values are less than 25 percent of the applicable WQS, the pollutant does not have the reasonable potential to cause or contribute to exceedances of WQS, and no wasteload allocation is done for that parameter. If either PEQ_{avg} or PEQ_{max} is greater than 25 percent of the applicable WQS, a wasteload allocation is conducted to determine whether the parameter exhibits reasonable potential and needs to have a limit or if monitoring is required. See Table 10 for a summary of the screening results.

Wasteload Allocation For those parameters that require a WLA, the results are based on the uses assigned to the receiving waterbody in OAC 3745-1. Dischargers are allocated pollutant loadings/concentrations based on the Ohio Water Quality Standards (OAC 3745-1). Most pollutants are allocated by a mass-balance method because they do not degrade in the receiving water. Wasteload allocations using this method are done using the following general equation: Discharger WLA = (downstream flow x WQS) - (upstream flow x background concentration). Discharger WLAs are divided by the discharge flow so that the allocations are expressed as concentrations.

The applicable waterbody uses for this facility's discharge and the associated stream design flows are as follows:

Aquatic life (WWH)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10
	Maximum	Annual 1Q10
Ammonia	Average	Summer 30Q10
		Winter 30Q10
Agricultural Water Supply		Harmonic mean flow
Human Health (nondrinking)		Harmonic mean flow

Allocations are developed using a percentage of stream design flow as specified in Table 9, and allocations cannot exceed the Inside Mixing Zone Maximum criteria.

Ohio's water quality standard implementation rules [OAC 3745-2-05(A)(2)(d)(iv)] required a phase out of mixing zones for bioaccumulative chemicals of concern (BCCs) as of November 15, 2010. This rule applied statewide. Mercury is a BCC. The mixing zone phase-out means that as of November 15, 2010 all dischargers requiring mercury limits in their NPDES permit must meet water quality standards at the end-of-pipe, which are 12 ng/l (average) and 1700 ng/l (maximum) in the Ohio River basin, or 1.3 ng/l (average) and 1700 ng/l (maximum) in the Lake Erie basin.

The data used in the WLA are listed in Tables 7 and 9. The wasteload allocation results to maintain all applicable criteria are presented in Table 8. The current ammonia limits have been evaluated using the wasteload allocation procedures and the summer ammonia limit is not protective of water quality standards for ammonia toxicity. The summer daily maximum limit changes from 1.46 mg/L to 1.40 mg/L.

Whole Effluent Toxicity WLA Whole effluent toxicity (WET) is the total toxic effect of an effluent on aquatic life measured directly with a toxicity test. Acute WET measures short term effects of the effluent while chronic WET measures longer term and potentially more subtle effects of the effluent.

Water quality standards for WET are expressed in Ohio's narrative "free from" WQS rule [OAC 3745-1-04(D)]. These "free froms" are translated into toxicity units (TUs) by the associated WQS

Implementation Rule (OAC 3745-2-09). Wasteload allocations can then be calculated using TUs as if they were water quality criteria.

The wasteload allocation calculations for WET are similar to those for aquatic life criteria - using the chronic toxicity unit (TU_c) and 7Q10 flow for the average and the acute toxicity unit (TU_a) and 1Q10 flow for the maximum. These values are the levels of effluent toxicity that should not cause instream toxicity during critical low-flow conditions. For Wooster WPCP, the wasteload allocation values are 0.4 TU_a and 1.25 TU_c.

The chronic toxicity unit (TU_c) is defined as 100 divided by the IC_{25}:

$$TU_c = 100/IC_{25}$$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations except when the following equation is more restrictive (Ceriodaphnia dubia only):

$$TU_c = 100/\text{geometric mean of NOEC and LOEC}$$

The acute toxicity unit (TU_a) is defined as 100 divided by the LC_{50} for the most sensitive test species:

$$TU_a = 100/LC_{50}$$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations.

When the acute wasteload allocation is less than 1.0 TU_a, it may be defined as:

Dilution Ratio (downstream flow to discharger flow)	Allowable Effluent Toxicity (percent effects in 100% effluent)
up to 2 to 1	30
greater than 2 to 1 but less than 2.7 to 1	40
2.7 to 1 to 3.3 to 1	50

The acute wasteload allocation for Wooster WPCP is percent mortality in 100 percent effluent based on the dilution ratio of 1.24 to 1.

Reasonable Potential/ Effluent Limits/Hazard Management Decisions

After appropriate effluent limits are calculated, the reasonable potential of the discharger to violate the water quality standards must be determined. Each parameter is examined and placed in a defined "group". Parameters that do not have a water quality standard or do not require a wasteload allocation based on the initial screening are assigned to either group 1 or 2. For the allocated parameters, the preliminary effluent limits (PEL) based on the most restrictive average and maximum wasteload allocations are selected from Table 8. The average PEL (PEL_{avg}) is compared to the average PEQ (PEQ_{avg}) from Table 3, and the PEL_{max} is compared to the PEQ_{max}. Based on the calculated percentage of the allocated value [($PEQ_{avg} \div PEL_{avg}$) X 100, or ($PEQ_{max} \div PEL_{max}$) X 100)], the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 10.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 11 presents the final effluent limits and monitoring requirements proposed for Wooster WPCP outfall 3PD00013001 and the basis for their recommendation.

The limits proposed for dissolved oxygen, total suspended solids, winter ammonia and 5-day carbonaceous biochemical oxygen demand ($CBOD_5$) are all based on plant design criteria. These limits are protective of water quality standards.

Limits proposed for oil and grease, pH, and *Escherichia coli* are based on Water Quality Standards (OAC 3745-1-07). Class A Primary Contact Recreation *E. coli* standards apply to the Killbuck Creek.

Water quality standards for *E. coli* became effective in March 2010, and a compliance schedule is proposed for meeting these new final effluent limits no later than May 1, 2014. The schedule provides time during the summer disinfection season for the plant to evaluate the ability of its existing disinfection system to achieve the new limits and to make operational changes or equipment upgrades if necessary. It is proposed that the plant comply with its current fecal coliform limits during the interim period.

The *Biological and Water Quality Study of the Killbuck Creek Watershed, 2009* (Ohio EPA) lists the Killbuck Creek as impaired for aquatic life. Considering the fact that municipal wastewater treatment plants discharge a nutrient load to the river, monthly monitoring for phosphorus and nitrate + nitrite is proposed based on best engineering judgment. Monitoring for phosphorus and nitrate + nitrite at the upstream and downstream stations also is proposed.

The Ohio EPA risk assessment (Table 10) places summer ammonia, bis(2-ethylhexyl)phthalate and copper in group 5. This placement as well as the data in Tables 1 and 3 indicate that the reasonable potential to exceed WQS exists and limits are necessary to protect water quality. For these parameters, the PEQ is greater than 100 percent of the wasteload allocation. Pollutants that meet this requirement must have permit limits under OAC Rule 3745-33-07(A)(1). The proposed limits are based on the wasteload allocation (Table 8).

Ohio EPA risk assessment (Table 10) places hexavalent chromium, mercury and total filterable residue in group 4. This placement as well as the data in Tables 1, 2 and 3 support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC Rule 3745-33-07(A)(2).

Ohio EPA risk assessment (Table 10) places arsenic, barium, chromium, iron, nickel, bromomethane, cadmium, free cyanide, lead, strontium and zinc in groups 2 and 3. This placement as well as the data in Tables 1,2 and 3 support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring is proposed for chromium, nickel, lead, cadmium, free cyanide and zinc to document that these pollutants continue to remain at low levels.

Sludge: Limits and monitoring requirements proposed for the disposal of sewage sludge by the following management practices are based on OAC 3745-40: land application, removal to sanitary landfill or transfer to another facility with an NPDES permit.

Additional monitoring requirements proposed at the final effluent, influent and upstream/downstream stations are included for all facilities in Ohio and vary according to the type and size of the discharge. In addition to permit compliance, this data is used to assist in the evaluation of effluent quality and treatment plant performance and for designing plant improvements and conducting future stream studies.

Whole Effluent Toxicity Reasonable Potential
Based on evaluating the whole effluent toxicity data presented in Tables 4 and 5 and other pertinent data under the provisions of OAC 3745-33-07(B), the Wooster wastewater treatment plant is placed in Category 3 with respect to whole effluent toxicity. Semi-annual monitoring is proposed for the life of the permit.

Other Requirements

Sanitary Sewer Overflow Reporting
Provisions for reporting sanitary sewer overflows (SSOs) are again proposed in this permit. These provisions include: the reporting of the system-wide number of SSO occurrences on monthly operating reports; telephone notification of Ohio EPA and the local health department, and 5-day follow up written reports for certain high risk SSOs; and preparation of an annual report that is submitted to Ohio EPA and made available to the public. Many of these provisions were already required under the "Noncompliance Notification", "Records Retention", and "Facility Operation and Quality Control" general conditions in Part III of Ohio NPDES permits.

Operator Certification
Operator certification requirements have been included in Part II, Item A of the permit in accordance with rules adopted in December 2006. These rules require the Wooster to have a Class IV wastewater treatment plant operator in charge of the sewage treatment plant operations discharging through outfall 001.

Operator of Record
In December 2006, Ohio Administrative Code rule revisions became effective that affect the requirements for certified operators for sewage collection systems and treatment works regulated under NPDES permits. Part II, Item A of this NPDES permit is included to implement rule 3745-7-02 of the Ohio Administrative Code (OAC). It requires the permittee to designate one or more operator of record to oversee the technical operation of the treatment works.

Storm Water Compliance
In order to comply with industrial storm water regulations, the permittee submitted a form for "No Exposure Certification" which was signed on January 8, 2009. Compliance with the industrial storm water regulations must be re-affirmed every five years. No later than January 8, 2014 the permittee must submit a new form for "No Exposure Certification" or make other provisions to comply with the industrial storm water regulations.

Outfall Signage
Part II of the permit includes requirements for the permittee to place a sign at each outfall to the Killbuck Creek providing information about the discharge. Signage at outfalls is required pursuant to Ohio Administrative Code 3745-33-08(A).

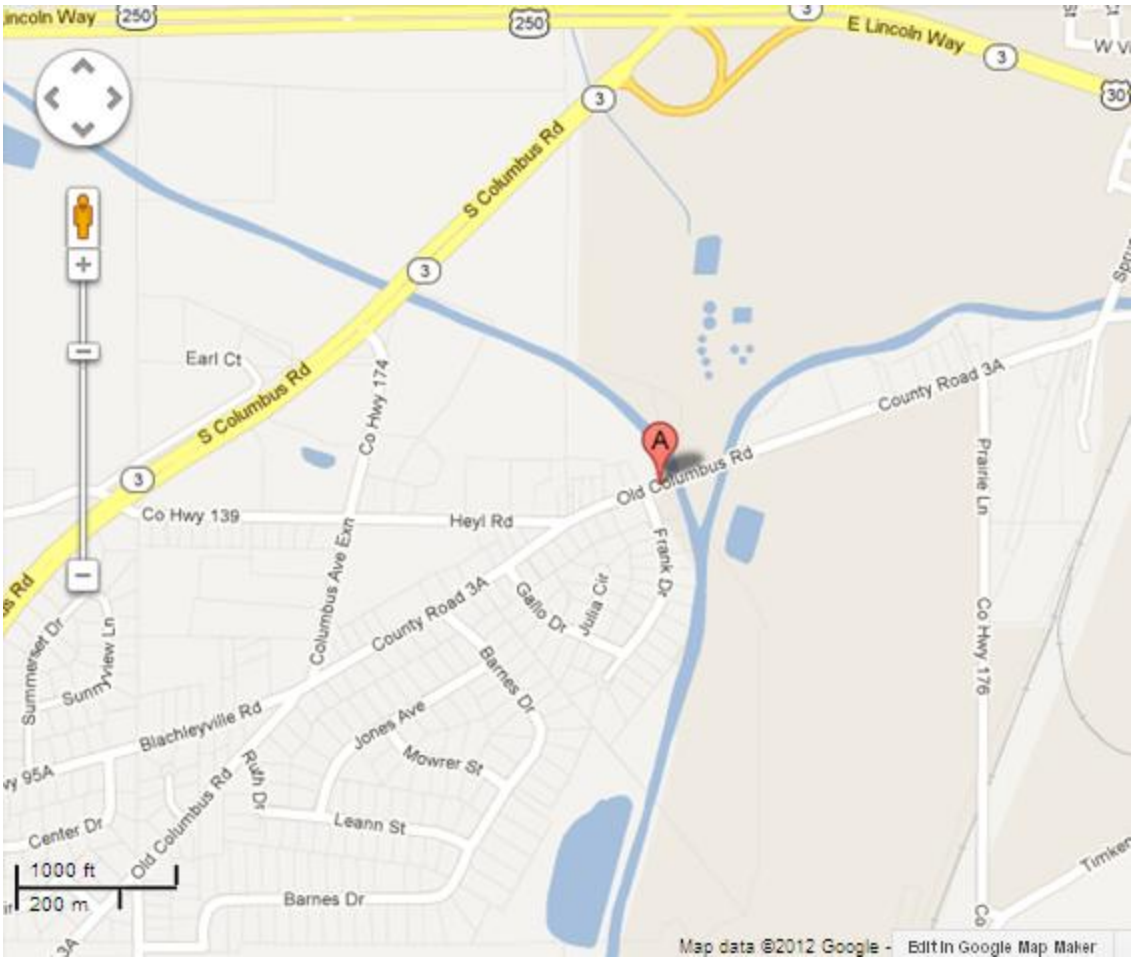

Figure 1. Approximate location of Wooster WPCP.

Table 1. Effluent Characterization.
Summary of analytical results for the Wooster WPCP outfall 3PD00013001.

	EPA Data			Pretreatment Data			
Parameter	7/28/2008	5/23/2011	10/31/2011	9/18/2008	9/16/2009	9/22/2010	9/21/2011
Total filterable residue (mg/L)	570	614	602	NT	NT	NT	NT
TSS (mg/L)	<5	<5	6	NT	NT	NT	NT
Arsenic (ug/L)	<2	6.2	5	<5	<5	<10	<5
Chromium (ug/L)	<2	11.2	<2	<7	<7	<7	<7
Copper (ug/L)	<2	3.2	4.3	<8	<8	<8	<8
Barium (ug/L)	<15	22	22	NT	NT	NT	NT
Calcium (mg/L)	66	72	74	NT	NT	NT	NT
Hardness (mg/L)	243	254	263	NT	NT	NT	NT
Iron (ug/L)	87	112	154	NT	NT	NT	NT
Magnesium (mg/L)	19	18	19	NT	NT	NT	NT
Manganese (ug/L)	87	89	90	NT	NT	NT	NT
Potassium (mg/L)	21	16	14	NT	NT	NT	NT
Sodium (mg/L)	99	93	117	NT	NT	NT	NT
Strontium (ug/L)	153	176	191	NT	NT	NT	NT
Zinc (ug/L)	20	20	17	20	16	20	32
Chloride (mg/L)	155	151	157	NT	NT	NT	NT
Nitrate+nitrite (mg/L)	2.26	6.99	4.06	NT	NT	NT	NT
TKN (mg/L)	4.25	1.29	1.09	NT	NT	NT	NT
Total Phosphorus (mg/L)	0.64	1.42	0.556	NT	NT	NT	NT
Bromomethane (ug/L)	<0.5	<0.5	2.16	NT	NT	NT	NT
Bis (2-ethylhexyl)phthalate[c] (ug/L)	<10	<10	<10	<10	<10	55	<10

NT = Not Tested.
[c.] Carcinogen

Table 2. Effluent Characterization and Design Criteria.

Summary of current permit limits and unaltered monthly operating report (MOR) data for Wooster WPCP outfal 3PD00013001. All values are based on annual records unless otherwise indicated. N=Number of analyses. * = For pH, 5th percentile shown in place of 50th percentile; ** = For dissolved oxygen, 5th percentile shown in place of 95th percentile; A = 7 day average. Decision Criteria: PEQavg = monthly average; PEQmax = daily maximum analytical results.

			Current Permit Limits			Percentiles			Decision Criteria		
Parameter	**Season**	**Units**	**30 day**	**Daily**	**# Obs.**	**50th**	**95th**	**Data Range**	**# Obs.**	**PEQ_{ave}**	**PEQ_{max}**
Outfall 001											
Water Temperature	Annual	C		Monitor	1858	17	23.1	6.6-25.3			
Dissolved Oxygen	Summer	mg/l		7.0 min	946	8.45	10	0-10.6	641	9.1477	15.424
Dissolved Oxygen	Winter	mg/l		5.0 min	904	6.4	10.1	0-11.5	452	7.1444	10.909
Total Suspended Solids	Annual	mg/l	16	24[A]	948	8	95.7	0-695	948	26.395	57.016
Total Suspended Solids	Annual	kg/day	455	682[A]	883	159	3190	0-33900			
Oil and Grease, Hexane Extr Method	Annual	mg/l		10.0 max	157	0	5	0-20	157	4.2383	5.6401
Nitrogen, Ammonia (NH3)	Summer	mg/l	1.46	2.19[A]	490	0.7	10.5	0-30.2	314	19.657	20.213
Nitrogen, Ammonia (NH3)	Winter	mg/l	4.48	6.71[A]	403	1.9	9.69	0-13.1	207	10.963	19.367
Nitrogen, Ammonia (NH3)	Summer	kg/day	41	62[A]	452	9.43	223	0-576			
Nitrogen, Ammonia (NH3)	Winter	kg/day	127	191[A]	377	41.5	232	0-719			
Nitrite Plus Nitrate, Total	Annual	mg/l		Monitor	94	2.36	8.04	0-18.2	96	7.8634	12.181
Phosphorus, Total (P)	Annual	mg/l		Monitor	269	0.51	4.24	0-13.6	271	2.9264	4.2293
Cyanide, Free	Annual	mg/l	0.014	0.023 max	78	0	0.01	0-0.01	65	0.0073	0.01
Cyanide, Free	Annual	kg/day	0.4	0.65	70	0	0.123	0-0.194			
Nickel, Total Recoverable	Annual	ug/l		Monitor	35	0	8.6	0-13	35	8.0756	11.906
Zinc, Total Recoverable	Annual	ug/l		Monitor	35	22	55.1	0-88	37	42.837	64.189
Cadmium, Total Recoverable	Annual	ug/l		Monitor	35	0	3	0-3	35	2.628	3.6
Lead, Total Recoverable	Annual	ug/l		Monitor	35	0	3	0-10	35	8.76	12
Chromium, Total Recoverable	Annual	ug/l		Monitor	35	0	17.9	0-25	36	18.046	27.141
Copper, Total Recoverable	Annual	ug/l	23	38 max	75	0	14	0-60	76	17.471	23.921
Copper, Total Recoverable	Annual	kg/day	0.6529	1.0788	67	0	0.413	0-2			
Chromium, Dissolved Hexavalent	Annual	ug/l		Monitor	39	0	1	0-10	33	8.76	12
Fecal Coliform	Annual	#/100 ml	1000	2000[A]	399	44	78200	0-580000			
Flow Rate	Annual	MGD		Monitor	1704	5.04	10.6	1.06-40.7			
Mercury, Total (Low Level)	Annual	ng/l	12	1700 max	33	1.8	32	0.5-428	33	25.99	39.21
Mercury, Total (Low Level)	Annual	kg/day	0.000341	0.0483	28	4.21E-05	0.000695	0.00000628-0.0385			

Table 2. Effluent Characterization and Decision Criteria – Continued.

Parameter	Season	Units	Current Permit Limits		# Obs.	Percentiles		Data Range	# Obs.	PEQ_{avg}	PEQ_{max}
			30 day	Daily		50th	95th				
Acute Toxicity, Ceriodaphnia dubia	Annual	TUa	Monitor		21	0	0.2	0-0.2			
Chronic Toxicity, Ceriodaphnia dubia	Annual	TUc		1.23 max	21	0	1.4	0-3.5			
Acute Toxicity, Pimephales promelas	Annual	TUa	Monitor		21	0	0.2	0-0.4			
Chronic Toxicity, Pimephales promelas	Annual	TUc		1.23 max	21	0	2	0-2.3			
pH, Maximum*	Annual	S.U.		9.0 max	1824	7.2	8.7	6.3-9.6			
pH, Minimum*	Annual	S.U.		6.5 min	1824	7.1	8.6	4.7-8.9			
CBOD 5 day	Summer	mg/l	10	15[A]	408	5	41.7	1-383	273	12.149	25.398
CBOD 5 day	Winter	mg/l	10	15[A]	404	5	21.9	0-148	203	9.1513	18.26
CBOD 5 day	Summer	kg/day	284	426[A]	370	83.6	870	10.3-7310			
CBOD 5 day	Winter	kg/day	284	426[A]	378	97.8	629	0-15500			

Table 3. Effluent Characterization and Projected Effluent Quality Values.

Parameter	Units	Number of Samples	Number > MDL	PEQ Average	PEQ Maximum
Ammonia-S	mg/l	314	271	19.657	20.213
Ammonia-W	mg/l	207	174	10.963	19.367
Arsenic - TR	ug/l	6	2	9.5046	13.02
Barium	ug/l	3	2	48.18	66
Bis(2-ethylhexyl)phthalate[c]	ug/l	7	1	80.3	110
Bromomethane	ug/l	3	1	4.7304	6.48
Cadmium - TR	ug/l	35	3	2.628	3.6
Chlorides	mg/l	3	3	343.83	471
Chromium - TR	ug/l	36	7	18.046	27.141
Chromium VI - Diss	ug/l	33	2	8.76	12
Copper - TR	ug/l	76	15	17.471	23.921
Cyanide - free (wwh,ewh,mwh)	mg/l	65	6	0.0073	0.01
Dissolved solids (ave)	mg/l	3	3	1344.66	1842
Iron - TR	ug/l	3	3	337.26	462
Lead - TR	ug/l	35	2	8.76	12
Magnesium	mg/l	3	3	41.61	57
Manganese - TR	ug/l	3	3	197.1	270
Mercury - TR (BCC)	ng/l	31	31	6.5032	10.834
Nickel - TR	ug/l	35	6	8.0756	11.906
Nitrate-N + Nitrite-N	mg/l	96	94	7.8634	12.181
Oil & grease	mg/l	157	9	4.2383	5.6401
Phosphorus	mg/l	271	270	2.9264	4.2293
Strontium	ug/l	3	3	418.29	573
TKN	mg/l	3	3	9.3075	12.75
Zinc - TR	ug/l	37	36	42.837	64.189

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Table 4. Summary of toxicity tests of the Wooster WPCP Effluent collected by the Entity.

Date	*Ceriodaphnia dubia*		*Pimephales promelas*	
	Acute Toxicity (Tua)	Chronic Toxicity (Tuc)	Acute Toxicity (Tua)	Chronic Toxicity (Tuc)
8/6/2007	AA	3.5	0.4	2.3
12/3/2007	AA	AA	AA	AA
3/17/2008	AA	AA	AA	AA
6/10/2008	AA	1.4	AA	1.1
8/11/2008	AA	1.4	AA	AA
12/15/2008	AA	1.4	AA	AA
3/9/2009	AA	AA	AA	AA
6/23/2009	AA	AA	AA	AA
8/3/2009	AA	AA	AA	AA
12/15/2009	AA	1.1	AA	AA
3/9/2010	AA	AA	AA	AA
6/14/2010	AA	AA	AA	AA
8/3/2010	AA	AA	AA	AA
12/13/2010	AA	AA	AA	AA
3/14/2011	AA	AA	AA	AA
6/14/2011	AA	AA	AA	AA
8/9/2011	AA	AA	AA	AA
12/12/2011	AA	AA	AA	AA
3/12/2012	AA	AA	AA	AA
6/18/2012	0.2	1	0.2	1
8/14/2012	0.2	1	0.2	2

[A] TU_a = acute toxicity units
[B] TU_c = chronic toxicity units
[C] AA = below detection limit (0.2 TU_a, 1.0 TU_c)

Table 5. Summary of acute toxicity test results of the Wooster WPCP Effluent collected by EPA.

	Ceriodaphnia dubia								*Pimephales promelas*							
	24 Hours				48 Hours				24 Hours				48 Hours			
Collection Date	UP	C	%M	TU_a	UP	C	%M	TU_a	UP	C	%M	TU_a	UP	C	%M	TU_a
7/28/2008	0	0	0	<1	0	0	0	<1	0	0	0	<1	0	0	0	<1
7/29/2008	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1	ND	0	10	<1
7/28/08-7/29/08[a]	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1
5/23/2011	0	0	0	<1	0	0	0	<1	0	0	0	<1	0	0	0	<1
5/24/2011	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1
5/23/11-5/24/11[a]	ND	0	5	<1	ND	0	5	<1	ND	0	0	<1	ND	0	0	<1
10/31/2011	0	0	0	<1	0	0	0	<1	0	0	0	<1	0	0	0	<1
11/1/2011	ND	0	0	<1	ND	0	0	<1	ND	5	0	<1	ND	5	0	<1
10/31/11-11/1/11[a]	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1	ND	0	0	<1

[a] = 24-hour composite sample
C = laboratory control water
%M = percent mortality in 100% effluent
ND = not determined
TU_a = acute toxicity units
UP = percent mortality in upstream control water

Table 6. Aquatic Life Use Attainment Status for Killbuck Creek.

The index of Biotic Integrity)IBI), Modified Index of Well-being (Miwb), and Invertebrate Community Index (ICI) scores are based on the performance of the biological community. Stream habitat reflects the ability to support a biological community. The Killbuck Creek watershed is located in the Erie-Ontario Lake Plain ecoregion and streams are currently designated Warmwater Habitat (WWH) or recommended (R) as an Exceptional Warmwater Habitat (EWH), Coldwater Habitat (CWH) or Modified Warmwater Habitat (MWH) waterbody. If biological impairment has occurred, the cause(s) and source(s) of the impairment are noted.

River Mile	Aquatic Life Use Designation	Aquatic Life Attainment Status	IBI	Miwb	ICI	QHEI	Causes	Sources
54.3/55.4 (Upstream)	WWH	Full	44	8.7	48	62		
49.9/50.3 (Upstream)	WWH	Full	38	8.9	50	50		
49.4 (Downstream)	WWH	Full	42	9	46	59		
46.0 (Downstream)	WWH	Partial	29	8.3	44	54.5	Direct habitat alterations, dissolved oxygen, organic enrichment.	Channelization, Wooster WWTP, natural sources.

Ecoregion Biocriteria: Erie-Ontario Lake Plain			
Index-Site Type	WWH	EWH	MWH
IBI: Headwater + Wading/Boat	40	50	24
Miwb: Wading / Boat	38	50	24
ICI	34	46	22

Table 7. Water Quality Criteria for Killbuck Creek downstream of Wooster WPCP.

		Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Average			Maximum	
Parameter	Units	Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Ammonia-S	mg/l	--	--	1.1	--	--
Ammonia-W	mg/l	--	--	3	--	--
Arsenic - TR	ug/l	--	100	150	340	680
Barium	ug/l	--	--	220	2000	4000
Bis(2-ethylhexyl)phthalate	ug/l	59c	--	8.4	1100	2100
Bromomethane	ug/l	4000	--	16	38	75
Cadmium - TR	ug/l	--	50	4.3	10	20
Chlorides	mg/l	--	--	--	--	--
Chromium - TR	ug/l	--	100	150	3200	6400
Chromium VI - Diss	ug/l	--	--	11	16	31
Copper - TR	ug/l	1300	500	17	27	55
Cyanide - free (wwh,ewh,mwh)	mg/l	220	--	0.012	0.046	0.092
Dissolved solids (ave)	mg/l	--	--	1500	--	--
Iron - TR	ug/l	--	5000	--	--	--
Lead - TR	ug/l	--	100	16	300	600
Magnesium	mg/l	--	--	--	--	--
Manganese - TR	ug/l	--	--	--	--	--
Mercury - TR (BCC)	ng/l	12	10000	910	1700	3400
Nickel - TR	ug/l	4600	200	95	850	1700
Nitrate-N + Nitrite-N	mg/l	--	100	--	--	--
Oil & grease	mg/l	--	--	--	10	--
Phosphorus	mg/l	--	--	--	--	--
Strontium	ug/l	--	--	21000	40000	81000
TKN	mg/l	--	--	--	--	--
Zinc - TR	ug/l	69000	25000	220	220	440
Molybdenum	ug/l	--	--	20000	190000	370000
Selenium - TR	ug/l	11000	50	5	--	--

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Table 8. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria.

		Outside Mixing Zone Criteria				Inside Mixing Zone Maximum
		Average			Maximum	
Parameter	Units	Human Health	Agri-culture	Aquatic Life	Aquatic Life	
Ammonia-S	mg/l	--	--	1.4	--	--
Ammonia-W	mg/l	--	--	--	--	--
Arsenic - TR	ug/l	--	207	187	423	680
Barium	ug/l	--	--	262	2477	4000
Bis(2-ethylhexyl)phthalate	ug/l	123	--	11	1369	2100
Bromomethane	ug/l	8369	--	20	47	75
Cadmium - TR	ug/l	--	105	5.4	12	20
Chlorides	mg/l	--	--	--	--	--
Chromium - TR	ug/l	--	208	188	3983	6400
Chromium VI - Diss	ug/l	--	--	14	20	31
Copper - TR	ug/l	2718	1044	21	33	55
Cyanide - free (wwh,ewh,mwh)	mg/l	460	--	0.015	0.057	0.092
Dissolved solids (ave)	mg/l	--	--	1794	--	--
Iron - TR	ug/l	--	9405	--	--	--
Lead - TR	ug/l	--	208	20	373	600
Magnesium	mg/l	--	--	--	--	--
Manganese - TR	ug/l	--	--	--	--	--
Mercury - TR (BCC)	ng/l	12	10000	910	1700	3400
Nickel - TR	ug/l	9622	416	118	1058	1700
Nitrate-N + Nitrite-N	mg/l	--	207	--	--	--
Oil & grease	mg/l	--	--	--	12	--
Phosphorus	mg/l	--	--	--	--	--
Strontium	ug/l	--	--	26262	49752	81000
TKN	mg/l	--	--	--	--	--
Zinc - TR	ug/l	144359	52301	274	273	440
Molybdenum	ug/l	--	--	25052	236517	370000
Selenium - TR	ug/l	23015	105	6.3	--	--

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Table 9. Instream Conditions and Discharge Flows.

Parameter	Units	Season	Value	Basis
Stream Flows				
1Q10	cfs	annual	2.84	USGS 0313880 and 0313900
7Q10	cfs	annual	2.93	USGS 0313880 and 0313900
30Q10	cfs	summer	3.45	USGS 0313880 and 0313900
		winter	6.05	USGS 0313880 and 0313900
Harmonic Mean	cfs	annual	12.67	USGS 0313880 and 0313900
Mixing Assumption	%	average	100	
	%	maximum	100	
Hardness	mg/l	annual	203	STORET 2009-10 n=11
pH	S.U.	summer	8	903 75th Percentile
		winter	8.05	903 75th Percentile
Temperature	C	summer	23	903 75th Percentile
		winter	5	903 75th Percentile
Wooster WPCP flow	cfs	annual	11.6	Permit Application
Background Water Quality				
Ammonia-S	mg/l		0.025	STORET; 2009-10; n=18; 12<MDL;
Ammonia-W	mg/l		0	No representative data available.
Arsenic - TR	ug/l		2.1	STORET; 2009-10; n=11; 4<MDL;
Barium	ug/l		52	STORET; 2009-10; n=11; 0<MDL;
Bis(2-ethylhexyl)phthalate	ug/l		0	No representative data available.
Bromomethane	ug/l		0	No representative data available.
Cadmium - TR	ug/l		0.1	STORET; 2009-10; n=11; 11<MDL;
Chlorides	mg/l		42.45	STORET; 2009-10; n=18; 0<MDL;
Chromium - TR	ug/l		1	STORET; 2009-10; n=11; 1<MDL;
Chromium VI - Diss	ug/l		0	
Copper - TR	ug/l		2	STORET; 2009-10; n=11; 5<MDL;
Cyanide - free (wwh,ewh,mwh)	mg/l		0	No representative data available.

Table 9. Instream Conditions and Discharge Flows – Continued.

Parameter	Units	Season	Value	Basis
Dissolved solids (ave)	mg/l		338	STORET; 2009-10; n=18; 0<MDL;
Iron - TR	ug/l		967	STORET; 2009-10; n=11; 0<MDL;
Lead - TR	ug/l		1	STORET; 2009-10; n=11; 1<MDL;
Magnesium	mg/l		16	STORET; 2009-10; n=11; 0<MDL;
Manganese - TR	ug/l		106	STORET; 2009-10; n=11; 0<MDL;
Mercury - TR (BCC)	ng/l		0	No representative data available.
Nickel - TR	ug/l		2.3	STORET; 2009-10; n=11; 5<MDL;
Nitrate-N + Nitrite-N	mg/l		1.885	STORET; 2009-10; n=18; 0<MDL;
Oil & grease	mg/l		0	No representative data available.
Phosphorus	mg/l		0.0425	STORET; 2009-10; n=18; 0<MDL;
Strontium	ug/l		169	STORET; 2009-10; n=11; 0<MDL;
TKN	mg/l		0.46	STORET; 2009-10; n=18; 0<MDL;
Zinc - TR	ug/l		5	STORET; 2009-10; n=11; 9<MDL;

Table 10. Parameter Assessment.

Group 1: Due to a lack of criteria, the following parameters could not be evaluated at this time.

Chlorides	Magnesium	Manganese - TR
Phosphorus	TKN	

Group 2: PEQ < 25 percent of WQS or all data below minimum detection limit. WLA not required. No limit recommended; monitoring optional.

Arsenic - TR	Barium	Chromium - TR
Iron - TR	Nickel - TR	Nitrate-N + Nitrite-N
Strontium		

Group 3: PEQ_{max} < 50 percent of maximum PEL and PEQ_{avg} < 50 percent of average PEL. No limit recommended; monitoring optional.

Bromomethane	Cadmium - TR	Cyanide - free
Lead - TR	Zinc - TR	

Group 4: PEQ_{max} >= 50 percent, but < 100 percent of the maximum PEL or PEQ_{avg} >= 50 percent, but < 100 percent of the average PEL. Monitoring is appropriate.

Chromium VI - Diss	Dissolved solids (ave)	Mercury - TR (BCC)

Group 5: Maximum PEQ >= 100 percent of the maximum PEL or average PEQ >= 100 percent of the average PEL, or either the average or maximum PEQ is between 75 and 100 percent of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

		Recommended Effluent Limits	
Parameter	Units	Average	Maximum
Ammonia-S	mg/l	1.4	--
Bis(2-ethylhexyl)phthalate	ug/l	11	1369
Copper - TR	ug/l	21	33

Copper - TR becomes a Group 5 parameter based upon the loading test [OAC 3745-2-06(B)].

Table 11. Final Effluent Limits and Monitoring Requirements for Wooster WPCP Outfall 3PD00013001 and the basis for their recommendation.

Parameter	Units	Effluent Limits				Basis
		Concentration		Loading (kg/day)		
		30 Day Average	Daily Maximum	30 Day Average	Daily Maximum	
Flow	MGD	Monitor				M[c]
Temperature	C	Monitor				M[c]
Dissolved Oxygen						
Summer	mg/L		7.0 min			EP
Winter	mg/L		5.0 min			EP
CBOD5	mg/L	10	15[d]	284	426[d]	EP
Total Suspended Solids	mg/L	16	24[d]	455	682[d]	EP
Total Filterable Residue	mg/L	Monitor				RP
Ammonia-N						
Summer	mg/L	1.40	2.10[d]	39.8	59.7[d]	WLA
Winter	mg/L	4.48	6.72[d]	127	191[d]	RP
Nitrite + Nitrate (N)	mg/L	Monitor				M[c]
Free Cyanide	mg/L	Monitor				M[c]
Oil and Grease	mg/L		10			WQS
pH	S.U.	6.5 min	9.0 max			WQS
E. coli	#/100mL	126	284			WQS
Bis(2-ethylhexyl)phthalate	ug/L	11.0	1370	0.313	38.9	WLA
Cadmium	ug/L	Monitor				M[c]
Chromium	ug/L	Monitor				M[c]
Hexavalent Chromium	ug/L	Monitor				RP
Copper	ug/L	21.0	33.0	0.597	0.937	WLA
Lead	ug/L	Monitor				M[c]
Mercury	ng/L	Monitor				RP
Nickel	ug/L	Monitor				M[c]
Phosphorus	mg/L	Monitor				M[c]
Zinc	ug/L	Monitor				M[c]
Whole Effluent Toxicity						
Chronic	Tu_c	Monitor				WET
Acute	Tu_a	Monitor				WET

[a] Effluent loadings based on average design discharge flow of 7.5 MGD.

[b] Definitions:

EP = Existing Permit

M = Division of Surface Water NPDES Permit Guidance 1: Monitoring frequency requirements for Sanitary Discharges

RP = Reasonable Potential for requiring water quality-based effluent limits and monitoring requirements in NPDES permits [OAC 3745-33-07(A)]

WET = Minimum testing requirements for whole effluent toxicity [OAC 3745-33-07(B)(11)]

WLA = Wasteload Allocation procedures (OAC 3745-2)

WQS = Ohio Water Quality Standards (OAC 3745-1)

[c] Monitoring of flow and other indicator parameters is specified to assist in the evaluation of effluent quality and treatment plant performance.

[d] 7 day average limit.